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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,276	12/13/2000	Thomas J. Kolze	36898/LTR/B600	7915
23363	7590	10/18/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			DUONG, FRANK	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	
			2666	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/737,276	<b>Applicant(s)</b> KOLZE, THOMAS J.	
	<b>Examiner</b> Frank Duong	<b>Art Unit</b> 2666	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/13/00, 6&amp;8/02</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is a response to the communication dated 12/13/00. Claims 1-17 are pending in the application.

#### ***Priority***

2. Applicant's claim for priority from provisional application 60/170,593 is acknowledged.

#### ***Information Disclosure Statement***

3. The information disclosure statements filed 12/13/00, 06/24/02 and 08/13/02 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

#### ***Specification***

4. The disclosure is objected to because of the following informalities: "DOCSIS complaint" recited on page 2, line 26 and throughout the application, should change to -- DOCSIS compliant--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2666

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Quigley et al (USP 6,650,624) (hereinafter "Quigley").

Regarding **claim 1**, in accordance with Quigley reference entirety, Quigley discloses a method for improving error rate performance of short data packets in an impulsive noise environment (*col. 64, lines 1-10 and thereafter*), the method comprising: initializing a cable modem on multiple channels and selecting the channels the cable modem is ranged on (*col. 64, lines 39-40 and thereafter, Quigley discloses upstream data transmission on an upstream channel is initiated by a request made by a cable modem for a plurality of time slots to transmit a message. If the grant is smaller than the request, the cable modem fragments the messages and transmits the fragment in the assigned time slots. In do so, it mitigates the undesirable collisions between data packet transmitted by different cable modems to a headend (col. 64, lines 5-8). The recitation thereat reads on the claimed limitations as recited*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Quigley further discloses wherein the cable modem is single carrier (*col. 23, lines 25-35 or col. 63, line 12*).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Quigley further discloses wherein the multiple channels include at

Art Unit: 2666

least one wideband channel and at least one narrowband channel (*col. 41, lines 14-16; 16-QAM and QPSK*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Quigley further discloses wherein the multiple channels include at least one wideband channel and at least one narrowband channel (*col. 41, lines 14-16; 16-QAM and QPSK*).

Regarding **claim 5**, in addition to features recited in base claim 2 (see rationales discussed above), Quigley further discloses wherein the cable modem sends a request for a grant to a cable modem termination system requesting to transmit a data packet (*col. 63, lines 58-64 and thereafter*).

Regarding **claim 6**, in addition to features recited in base claim 5 (see rationales discussed above), Quigley further discloses wherein the grant indicates which channel the cable modem will transmit the data packet on (*col. 63, lines 65-67 or col. 64, lines 44-47 and thereafter*).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Quigley further discloses wherein a wideband channel is utilized if the data packet is long (*col. 65, lines 7-33, Quigley discloses multiple grant mode*).

Regarding **claim 8**, in addition to features recited in base claim 6 (see rationales discussed above), Quigley further discloses wherein a narrowband channel is utilized if the data packet is short (*col. 65, lines 7 and 40-43, Quigley discloses piggyback grant mode*).

Regarding **claim 9**, in addition to features recited in base claim 5 (see rationales discussed above), Quigley further discloses wherein the cable modem termination system transmits to the cable modem a list of channel parameters, a list of burst profile parameters and a list of user unique parameters (*Figs. 44-45 and col. 54, line 24 to col. 55, line 19*).

Regarding **claim 10**, in addition to features recited in base claim 5 (see rationales discussed above), Quigley further discloses wherein the request for the grant is in minislots (see Fig. 48; 480 or Figs. 49-51).

Regarding **claim 11**, in addition to features recited in base claim 5 (see rationales discussed above), Quigley further discloses wherein the request for the grant is in bytes (see Fig. 48; 480).

Regarding **claim 12**, in addition to features recited in base claim 9 (see rationales discussed above), Quigley further discloses wherein the request for the grant is in minislots (see Fig. 48; 480).

Regarding **claim 13**, in addition to features recited in base claim 9 (see rationales discussed above), Quigley further discloses wherein the request for the grant is in bytes (see Fig. 48; 480).

Regarding **claim 14**, in addition to features recited in base claim 6 (see rationales discussed above), Quigley further discloses wherein cable modem termination system determines which upstream channel to transmit the data packet based upon the size of the data packet and upstream traffic conditions (*col. 37, lines 62-67 and thereafter*).

Art Unit: 2666

Regarding **claim 15**, in addition to features recited in base claim 9 (see rationales discussed above), Quigley further discloses wherein the cable modem termination system transmits to the cable modem, via the grant, a channel selected from the multiple channels to transmit the data packet (*col. 45, line 62 to col. 46, line 7 or col. 63, lines 18-35 and thereafter*).

Regarding **claim 16**, in addition to features recited in base claim 5 (see rationales discussed above), Quigley further discloses wherein the request for the grant is sent on a narrowband channel (*Figs. 48-51; minislots*).

Regarding **claim 17**, in addition to features recited in base claim 15 (see rationales discussed above), Quigley further discloses wherein at least two short data packets are bundled together to make a new long packet to transmit over a wideband channel (*col. 65, lines 21-27*).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Roeck (USP 6,742,186).

Leano et al (USP 6,453,472).

Unger et al (USP 6,230,326).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (571) 272-3164. The examiner can normally be reached on 7:00AM-3:30PM.

Art Unit: 2666

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frank Duong  
Examiner  
Art Unit 2666

October 08, 2004